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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,367	11/15/2000	Rainer Karer	0775/000003	6131

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NOVAK DRUCE DELUCA & QUIGG, LLP
1300 EYE STREET NW
SUITE 400 EAST TOWER
WASHINGTON, DC 20005

EXAMINER

NECKEL, ALEXA DOROSHENK

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,367

Applicant(s)

KARER ET AL.

Examiner

Alexa D. Neckel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-8 and 10-23 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,10 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims 11-15 drawn to an invention nonelected with traverse in the paper filed October 25, 2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 18-22 been renumbered 19-23.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 2, 10, 16, 17, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Govoni et al. (6,413,477).

With respect to claims 1 and 2, Govoni et al. discloses an apparatus comprising:
a reactor chamber (60) in the form of a vertical cylinder (col. 10, lines 47-48);
wherein the reactor chamber (60) can have larger diameter at its upper end (col. 11, lines 25-28) which would thus inherently form a calming zone;

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a recycle (circulation) line (81) with a compressor (79) and cooling device (80) within the line (81);

wherein there is no gas distributor plate within the reactor (see figure 3 and col. 10, line 60- col. 11, lines 6); and

wherein there is no internal heat exchanger within the reactor (see figure 3 and 3 and col. 12, lines 20-21).

With respect to claims 10 and 23, Govoni et al. discloses wherein there is a cyclone solid/gas separator (72, col. 6, lines 27-32 and col. 10, line 52) between the reactor (60) and the compressor (79) and cooling device (80) of the line (81).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3, 4, 6, 10, 16, 18-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Govoni et al. (6,413,477).

With respect to claims 1, 3, 4, 16, 18, and 19, Govoni et al. discloses an apparatus comprising:

a reactor chamber (20) in the form of a vertical cylinder (col. 10, lines 47-48);

wherein the reactor chamber (20) can have larger diameter at its upper end (col. 11, lines 25-28) which would thus inherently form a calming zone;

a recycle (circulation) line (36) with a compressor (26) and cooling device (27) within the line (36);

wherein there is a single gas distributor plate (33) within the reactor (see figure 2) to shape flow homogenously to the reaction bed; and

wherein there is no internal heat exchanger within the reactor (see figure 2 and 3 and col. 12, lines 20-21).

Govoni et al. fails to disclose any particulars with regard to the amount of open space provided to the gas distribution grid (33). It has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Also see MPEP 2144.

With respect to claims 6 and 20, Govoni et al. fails to disclose any particulars with regard to the dimensions of the reactor, but does disclose wherein it can have a high aspect ratio (height/diameter ratio) (col. 7, lines 28-30). It has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976);

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In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Also see MPEP 2144.

With respect to claims 10 and 23, Govoni et al. discloses wherein there is a cyclone solid/gas separator (22, col. 6, lines 27-32 and col. 10, line 52) between the reactor (20) and the compressor (26) and cooling device (27) of the line (36).

7. Claims 7, 8, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Govoni et al. (6,413,477), as applied to claim 1, and further in view of Lubbock (2,636,712).

With respect to claim 7, 8, 21, and 22, Govoni et al. fails to disclose a closable flap with holes at the region of transition (where the circulation inlet 65 enters the reactor).

Lubbock teaches a slide valve (equivalent to a flap) with orifices (col. 2, lines 18-28) used to control the flow of solids in suspension (col. 1, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the slide valve of Lubbock in the area where the circulation gas inlet (65) and the reactor (60) connect in order to control the amount of particles which would fall through the grid and into the circulation line.

With further respect to claims 8 and 22, Lubbock fails to disclose a specific size range for the orifices but Lubbock does disclose that the sizes of the orifices are variable (col. 2, lines 18-28). Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the orifice sizes necessary to obtain desired operational conditions (In re Boesch, 617 F.2d. 272, 205

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USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Response to Arguments

8. Applicant's arguments with respect to claims 1-4, 6-8 and 10 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

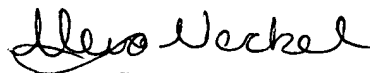
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-

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1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexa D. Neckel
Primary Examiner
Art Unit 1764

September 27, 2006